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Title: HEAT SPREADER WITH DOWN SET LEG ATTACHMENT FEATURE

Assignee: Intel Corporation

REMARKS

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Claim 36 is amended, no claims are canceled, and no claims are added; as a result, claims 7-11 and 26-41 are now pending in this application.

The Office Action Summary at checkboxes 4 and 6 indicates that claims 3-11 and 26-41 are pending and rejected. Applicant submits that claims 1-6 and 12-25 in the application are canceled, and that claims 7-11 and 26-41 are the currently pending claims. Applicant respectfully requests clarification or correction of the Office Action Summary.

The amendments to the specification were made to correct obvious typographical errors, the correction being made so that description of the type of drawing illustrated in FIGS. 1 and 2 matches the type of drawing depicted in FIGS. 1 and 2. No new matter is included in the amendment to the specification.

Formal drawings of FIG. 1, FIG. 2, FIG. 3A, FIG. 3B, FIG. 4, FIG. 5, and FIG. 6 on sheets 1-4 are included with this response. No amendments to the informal drawings as filed have been made. No new matter is included with this submission of formal drawings.

Claim Objections

Claim 36 was objected to because of the following reasons: In line 6, "a semiconductor die" should read -- a microelectronic die--, and "the depth of the cavity" should read -- a depth of the cavity--. Claim 36 had been amended as suggested by the Examiner. Applicant respectfully requests removal of this objection.

First §103 Rejection of the Claims

Claims 7-9, 27-28, and 32-39 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hiroyuki (JP 59188944), Applicant's submitted prior art (ASPA), in view of the specification of the invention.

Independent claims 7, 28, and 36 include the limitation of a cavity for placement of a microelectronic die and that the cavity has a depth less than or equal to a thickness of the die. (See page 6, line 25 of the present patent application.) This limitation also appears in claims 8-9, 27, 32-35, and 37-39 that depend from one of independent method claims 7, 28, and 36. The

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Office Action on pages 3, 5, and 6 admits that the Hiroyuke publication fails to disclose these elements, but relies on "page 6, lines 25-27 of the present patent application" to supply these elements missing from the Hiroyuke publication.

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However, the reference to page 6, lines 25-27 of the present patent application is <u>not</u> "Applicant's submitted prior art." The first sentence of the paragraph containing the referenced portion of the specification, at page 6, lines 6-8 states, "FIGS. 1 and 2 show two different views of a microelectronic package 300, which may address at least some of the previously described manufacturing and thermal performance concerns." These are statements describing that which the Applicant has invented. There is no indication on either of FIGS. 1 or 2 that these are "prior art." Further, page 6, lines 25-27 of the specification are included under the "DETAILED DESCRIPTION" heading, and therefore are part of the written description supporting the claimed invention, and thus do not constitute "Applicant's submitted prior art." Therefore, the cited portion of the specification (page 6, lines 25-27) is unavailable for use in forming the 35 U.S.C. § 103(a) rejection of the claims.

It is impermissible to use an Applicant's description of Applicant's own invention to reject Applicant's claims. The Examiner cites no legal authority for using Applicant's invention disclosure to reject Applicant's claims. Applicant submits that it is well settled law that this action is not permissible. Since the Office Action fails to cite any proper document that describes these elements missing from the Hiroyuke publication, the Office Action fails to state a *prima facie* case of obviousness with respect to claims 7-9, 27-28, and 32-39. Reconsideration of claims 7-9, 27-28, and 32-39 is respectfully solicited.

Second§103 Rejection of the Claims

Claims 10 and 30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hiroyuki (JP 59188944) in view of Domadia et al. (U.S. 5,949,137). Claims 10 and 30 contain the limitations of having a cavity for placement of a microelectronic die and the cavity having a depth less than or equal to a thickness of the die as found in the independent claims upon which these claims depend. These limitations are not found in the combination of the Hiroyuki publication and the Domadia et al. patent.

AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111

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Applicant respectfully submits that since all of the limitations of claims 10 and 30 are not found in the combination of the Hiroyuki publication and the Domadia et al. patent, the rejection of claims 10 and 30 under 35 U.S.C. § 103(a) is not valid. Reconsideration of claims 10 and 30 is respectfully solicited.

Third §103 Rejection of the Claims

Claims 11, 26, and 31 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hiroyuki (JP 59188944) in view of Tarter et al. (U.S. 6,512,675). Claims 11, 26, and 31 contain the limitations of having a cavity for placement of a microelectronic die and the cavity having a depth less than or equal to a thickness of the die as found in the independent claims upon which these claims depend. These limitations are not found in the combination of the Hiroyuki publication and the Tarter et al. patent.

Applicant respectfully submits that since all of the limitations of claims 11, 26, and 31 are not found in the combination of the Hiroyuki publication and the Tarter et al. patent, the rejection of claims 11, 26, and 31 under 35 U.S.C. § 103(a) is not valid. Reconsideration of claims 11, 26, and 31 is respectfully solicited.

Fourth §103 Rejection of the Claims

Claims 40 and 41 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hiroyuki (JP 59188944) in view of Zuo et al. (U.S. 6,525,420). Claims 40 and 41 now contain the limitations of having a cavity for placement of a microelectronic die and the cavity having a depth less than or equal to a thickness of the die, as found in the independent claims upon which these claims depend. These limitations are not found in the combination of the Hiroyuki publication and the Zuo et al. patent.

Applicant respectfully submits that since all of the limitations of claims 40 and 41 are not found in the combination of the Hiroyuki publication and the Zuo et al. patent, the rejection of claims 40 and 41 under 35 U.S.C. § 103(a) is not valid. Reconsideration of claims 40 and 41 is respectfully solicited.

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Request for Interview

Applicant respectfully requests an interview with the Examiner to discuss the legal authority that allows the Examiner to cite the Applicant's own disclosure against the Applicant's claims. The Examiner can contact Applicant's Attorney Dan Kluth at (612) 373-6904.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 373-6904 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

SABINA J. HOULE ET AL.

By their Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A. Attorney's for Intel Corporation

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Date

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<u>CERTIFICATE UNDER 37 CFR 1.8:</u> The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 23rd day of <u>September, 2005</u>.

Name

Signature

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IN THE DRAWINGS

Formal drawings are supplied herewith, including FIG. 1, FIG. 2, FIG. 3A, FIG. 3B, FIG. 4, FIG. 5, and FIG. 6 on sheets 1-4, including a marking of "REPLACEMENT SHEET" on each of sheets 1-4.

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